

## CLAIMS

We claim:

- 5           1.       A method for migrating an open network connection comprising:  
encapsulating one or more active processes and a system environment relating to said  
processes into a compute capsule;  
assigning said compute capsule a unique locator;  
establishing one or more open network connections between said compute capsule and one  
10   or more other compute capsules;  
migrating said compute capsule;  
re-establishing said open network connection using said unique locator.
2.       The method of claim 1 wherein said unique locator is an IP address and a  
15   network locator.
3.       The method of claim 2 wherein said unique locator is stored using a directory  
service.
- 20          4.       The method of claim 3 wherein said directory service uses LDAP or DNS.
5.       The method of claim 1 wherein migrating said compute capsule is performed  
within a kernel.

6. The method of claim 1 wherein migrating said compute capsule is performed within specialized routers.

7. The method of claim 1 wherein re-establishing said open network  
5 connection using said unique locator is performed within a kernel.

8. The method of claim 1 wherein re-establishing said open network connection using said unique locator is performed within specialized routers.

10 9. A computer program product comprising, a computer usable medium having computer readable program code embodied therein configured to migrate an open network connection, said computer product comprising:

computer readable code configured to cause a computer to encapsulate one or more active processes and a system environment relating to said processes into a compute capsule;

15 computer readable code configured to cause a computer to assign said compute capsule a unique locator;

computer readable code configured to cause a computer to establish an open network connection between said compute capsule and one or more other compute capsules;

20 computer readable code configured to cause a computer to migrate said compute capsule; and

computer readable code configured to cause a computer to re-establish said open network connection using said unique locator.

10. The computer program product of claim 9 wherein said unique locator is an IP address and a network locator.

5 11. The computer program product of claim 10 wherein said unique locator is stored using a directory service.

12. The computer program product of claim 11 wherein said directory service uses LDAP or DNS.

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13. The computer program product of claim 9 wherein migrating said compute capsule is performed within a kernel.

14. The computer program product of claim 9 wherein migrating said compute capsule is performed within specialized routers.

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15. The computer program product of claim 9 wherein re-establishing said open network connection using said unique locator is performed within a kernel.

20 16. The computer program product of claim 9 wherein re-establishing said open network connection using said unique locator is performed within specialized routers.